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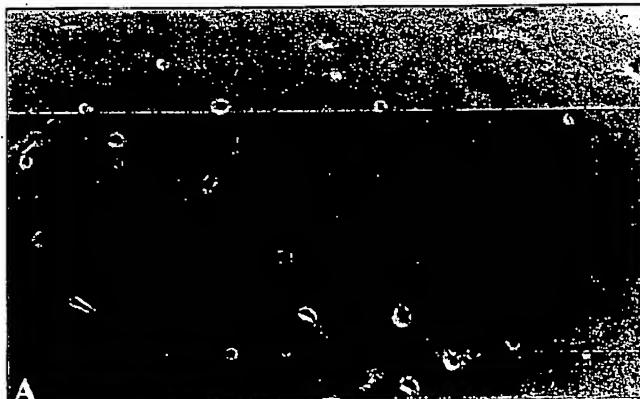
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(54) Title: COMPOSITIONS AND METHODS FOR PROMOTING NERVE REGENERATION



WO 01/03692 A1

(57) Abstract: Neurite outgrowth and nerve regeneration are promoted by disruption of the steroid receptor complex and stimulation of MAP kinase/kinase activity. This disruption can take the form of disruption of the physical assembly or function of the steroid receptor complex, such as the mature complex or a precursor of the mature complex that is required for assembly of the mature complex. Geldanamycin and its analogs, basticidin and members of the basticidin family, and radicicol and its analogs, as well as FKBP-52 antibody, are shown to disrupt the complex and promote nerve growth. Assays for finding neurotrophic compounds, as well as compounds found by these assays, pharmaceutical compositions into which they are incorporated, and methods of treating subjects having neuronal dysfunction caused by injury or disease are disclosed. Any of these compounds can be used in combination with a therapeutically effective amount of heat, such as heat applied locally to an area where nerve growth is desired, or systemically in an organism in which neurite growth is desired. Alternatively, these compounds can be used in association with a template, such as a tubular member that defines an anatomic pathway along which nerve regeneration is desired (particularly around transected or partially transected nerve).

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